Frequently Asked Questions about Utility Public Safety Power Shut-off (PSPS) Events

1. **I am dependent on electricity for a medical device. Where can I find more information on planning for a power shut-off?**

If you rely on electric or battery-dependent assistive technologies and medical devices, including breathing machines, power wheelchairs or scooters, and home oxygen or dialysis equipment, make sure that you have planned for an extended power outage. More information on planning can be found through the Pacific ADA Center.

2. **Can I use my solar panels to provide backup power in the event of a power shut-off?**

Maybe. During a power shut-off, most solar systems will automatically power down. This behavior prevents any flow of power into your utility's de-energized electric grid and is essential to ensure the safety of repair crews and first responders. However, while many solar systems are designed to operate only while the grid is operating normally, some systems have the ability to "island" during outage conditions and provide power to some or all of the appliances in your home.

Please check with your solar provider and/or your licensed contractor to determine the capabilities of your specific system.

3. **Can I modify my solar system to provide backup power? How much will that cost?**

Yes. The options available to you will depend on the specifics of your solar system. Many solar systems can be retrofitted to provide backup power either by replacing the inverter with a specifically designed model or by adding backup battery storage (discussed in the FAQs below).

Some inverters are designed to provide limited backup power during grid outages, even if no battery is installed. However, these technologies have limitations. First, they only provide power while your solar system is generating power. No power is available at night, for instance, and you might lose power when a cloud shades your solar panels. For this reason, this technology is not suitable for powering some medical devices. Second, inverters that provide backup power typically can't provide enough power to meet all your typical home needs. Instead, they can be used to run specific appliances, like your refrigerator, or provide a place to charge your phone.

The cost of replacing an inverter varies. Replacement inverters typically cost around $1,000 to $2,500 depending on the size of your solar system. Inverters with advanced capabilities such as those described above might cost more than a regular inverter.

Contact your solar provider and/or licensed contractor for more information. Also contact your utility to ensure that you meet all safety and interconnection requirements.

4. **Can a battery be used to provide backup power? How much will that cost?**

Yes. Most battery storage systems are capable of providing backup power. The length of time that you can power your appliances will depend on the size and rating of the battery and on the amount of power your appliances draw. Contact your battery installer or manufacturer to make sure you know the limits of your system and can appropriately prioritize your energy usage.

The cost of a battery ranges from $5,000 to over $7,000. With installation, you can probably expect to spend from $7,000 to over $20,000 for the whole battery system, depending on the size and type of batteries.

Incentives may also be available through the Self-Generation Incentive Program to help decrease the cost of the system. For information on how to apply for incentives in your area, please contact the Program Administrator for your utility:

- Pacific Gas and Electric Company (for PG&E electric customers and PG&E gas customers of public electric utilities in Northern California)
- Southern California Edison (for SCE customers)
- Southern California Gas Company (for SoCalGas customers that take electric service from a non-SCE entity in Southern California)
- Center for Sustainable Energy (for San Diego Gas & Electric customers)

Contact your battery provider and/or licensed contractor for more information. Also contact your utility to ensure that you meet all safety and interconnection requirements.

5. **Can a generator be used to provide backup power? How much will that cost?**

Yes. Generators can provide backup power at a cost of $500 to over $10,000, depending on the size. They can also be noisy and pose safety hazards, including fire and carbon monoxide poisoning. It's important to understand how to safely operate your generator before an emergency occurs. This means performing regular safety checks and ensuring you have enough fuel to last through the power shut-off. If you don't understand how to use your generator, you risk damaging your property, endangering your life, and endangering the lives of repair crews and first responders working in your community.

Generators may be subject to state and local air quality regulations. To find the air quality regulator serving your area and obtain more information, please visit the California Air Resources Board's website. There may also be community ordinances where you live that

restrict or limit noise from generators. Further, your city or county building department should inspect any changes to your home's wiring.

If your generator is connected directly to your home's wiring system, you are also responsible for making sure power does not flow into your utility's de-energized electric grid. Contact a licensed contractor for more information. Also contact your utility to ensure that you meet all safety and interconnection requirements.

6. **If my home energy system is capable of providing backup power, what appliances will work and for how long?**

A single-battery system can typically power your priority appliances (e.g., refrigerator, lighting, and a few other outlets) for 24 to 48 hours during a power shut-off. A larger, multi-battery system can provide full backup power for 24 to 48 hours during a power shut-off.

If you have a solar plus battery storage system and the sun is shining, the amount of time you have backup power is extended.

A generator can provide backup power for as long as fuel is available.

7. **Do I need to contact my electric utility in order to use backup power?**

Yes. You must contact your utility if you intend to use backup power that is connected directly to your home's wiring system. For more information, please contact your utility:

- Pacific Gas and Electric Company
- Southern California Edison
- San Diego Gas & Electric
- PacifiCorp/Pacific Power
- Bear Valley Electric Service
- Liberty Utilities

8. **Can I use my electric vehicle's battery to power my home in the event of a power shut-off?**

Probably not. The current technology on most electric vehicles (EVs) is not capable of transferring power from the vehicle to a building. Most EVs currently on the road are only able to receive power from an EV charger and do not have "bidirectional capabilities." However, a number of EV manufacturers have plans to release bidirectional-capable models in the near future.

Another barrier that prevents using an EV as a backup power source is the risk of voiding the manufacturer's warranty if the battery is used for any function other than powering the vehicle. Please contact your manufacturer for more information on battery warranty requirements.

9. How do I charge my electric vehicle during a power shut-off?

Plans should be made to fully charge your electric vehicle (EV) as soon as you receive notice that a power shut-off is planned in your area.

During a power shut-off, you should use a public charging station location tool, such as PlugShare, to find chargers located in unaffected areas. If you have backup power, you may be able to continue charging your EV (see the above FAQs). Please contact your home energy provider and/or licensed contractor to see if your system can be used during a power shut-off.

Finally, the utilities open Community Resource Centers in impacted areas to support customers affected by power shut-offs. The Community Resource Centers provide access electricity to charge electric devices, sometimes including EVs. Please contact your utility prior to a power shut-off for more information on Community Resource Centers.

10. Is there anything else I should do to prepare my electric vehicle for a power shut-off?

If you have an electric garage door that you are unable to operate manually, move your EV outside of your garage before the power shut-off.

There may be issues with keeping your EV plugged in during a power shutoff, so it's best to unplug your EV for the duration of the event.

If you are unable to charge your EV during a power shut-off, practice smart driving behavior to conserve your vehicle's power. Avoid accelerating quickly and braking abruptly, keep your tires properly inflated, lower the vehicle's heater or air conditioner, and turn the vehicle off when not in use.

11. Is there anything else I should know to prepare for a power shut-off?

Your water and gas should stay on during a power shut-off. However, if your water requires an electric pump, such as in a high-rise building or for well systems, then it will also be turned off.

If you have electric appliances like hot water heaters and electric stoves, you should be prepared to not be able to use these appliances for the duration of the power shut-off.